

Proceedings of the National Academy of Sciences, India Section A: Physical Sciences

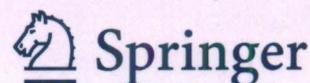
Special Issue on Advances in Memory Materials

Guest Editor: Neeraj Khare



02/2/24
SP

Official Publication of
The National Academy of Sciences, India
5, Lajpatrai Road, Allahabad-211002 (India)



Proceedings of the National Academy of Sciences, India

Section A: Physical Sciences

Volume 93 · Number 3 · July–September 2023

Special Issue on Advances in Memory Materials

Guest Editor: Neeraj Khare

EDITORIAL

Special Issue on Advances in Memory Materials

N. Khare 423

SCIENTIFIC RESEARCH PAPERS

Multi-level Threshold Switching and Crystallization Characteristics of Nitrogen Alloyed GaSb for Phase Change Memory Application

J. Asirvatham · L. Walczak · A. Kanjilal 425

Formation of 360° Domain Wall in a Ferromagnetic Nanowire by Splitting and Recombination of 180° Domain Wall

V. Haragopal · R. Jaiswal · C. Murapaka · V. Kannan 433

RESEARCH ARTICLES

Magnetization Dynamics of Domain Walls in Cylindrical Nanowires

M.S. Devapriya · K. Biswas · C. Murapaka · A. Haldar 439

Investigation of Defect-Driven Memristive and Artificial Synaptic Behaviour at Nanoscale for Potential Application in Neuromorphic Computing

R. Mandal · D. Hasina · A. Mandal · T. Som 445

Controlled Self Compliance Filamentary Memory Behavior in Al/NiFe₂O₄/FTO Resistive Switching Device

V. Pandey · P. Nehla · S. Munjal 451

REVIEW ARTICLES

Emerging Memory Technologies for Data Storage and Brain-Inspired Computation: A Global View with Indian Research Insights with a Focus on Resistive Memories

S. Lashkare · W. Uddin · K. Priyadarshi · U. Ganguly 459

Kagome Magnets: The Emerging Materials for Spintronic Memories

N. Chowdhury · K.I.A. Khan · H. Bangar · P. Gupta · R.S. Yadav · R. Agarwal · A. Kumar · P.K. Muduli 477

An Account of Natural Material-Based Nonvolatile Memory Device

F.Y. Rahman · D. Bhattacharjee · S.A. Hussain 497

Advances in All Optical Spintronic Memory

C. Banerjee · A. Barman 511

Review Paper on Ni-Cu Ferrite

P.B. Wasnik · S.D. Rokade · K.G. Rewatkar 517

Further articles can be found at link.springer.com

Instructions for Authors for *Proc. Natl. Acad. Sci., India, Sect. A Phys. Sci.* are available at <http://www.springer.com/40010>